UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,173	02/10/2006	Walid Ali	PHUS030273US	6165

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EXAMINER
BEHRINGER, LUTHER G

ART UNIT	PAPER NUMBER
3766	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _23 November 2009_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-16_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _10 February 2006_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the communication received on 11/23/2009

concerning application no. 10/568173 filed on 02/10/2006.

Response to Arguments

2.   Applicant's arguments filed 11/23/2009 have been fully considered but they are

not persuasive.

3.   Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount

to a general allegation that the claims define a patentable invention without specifically

pointing out how the language of the claims patentably distinguishes them from the

references.

4.   In addition, applicant failed to address the double patenting rejection presented

06/22/2009.

Claim Objections

5.   An amendment to the claim 7 has obviated the necessity of the objection raised

in the action dated 06/22/2009. Therefore, that objection is withdrawn.

6.   The objection to claim 10 is maintained. Claim 10 presents the alternative step of

"providing an alarm indication ... if no artifact was detected." This appears to be the

opposite of the requirement of parent claim 7, in which the alarm indication is triggered

"in response to determining an artifact was detected."

Claim Rejections - 35 USC § 102

7.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8.   Claim(s) 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by **Shimauchi et al. (US 5,661,813, herein Shimauchi)**.

        Regarding **claim(s) 1 and 13,** Shimauchi discloses a device and system comprising: a controller, *echo canceller* **22_m**; a memory coupled to the controller, *Sig Storage and Vect Gen* **17_n**; and an input interface arranged to receive at least two event signals, **11_1, 11_2, 11_n,** wherein the controller is arranged to determine a global correlation, for the at least two event signal over a first period of time, *correlation between previously received signals*, determine a local correlation, for the at least two event signals over a second period of time which is shorter than the first period of time, *correlation between current received signals*, determine a deviation between a local correlation vector and a global correlation vector, *a variation in the cross-correlation*, determine an average deviation from the deviation, *Normalized Least Mean Square algorithm*, and determine whether an artifact, *echo,* was detected in one of the at least two event signals (Abstract, Fig. 6, Col. 2, ll. 9 – 37).

Claim Rejections - 35 USC § 103

9.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10.   Claim(s) 2 – 6 and 14 – 16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Shimauchi et al. (US 5,661,813, herein Shimauchi)** in view of

Snyder et al. (US 6,287,328, herein Snyder) (cited previously).

With regard to **claim(s) 2 and 14**, Shimauchi fails to disclose wherein said device

is a patient monitoring system.

However, Snyder teaches wherein said device is a patient monitoring system

(Abstract).

11.   As applicant admits on page 4, ll. 12 – 20 of the specification that the instant

invention is intended for use with any measured input signal source, it would have been

obvious for one of ordinary skill in the art at the time of the invention to modify the

patient monitoring system having multivariable artifact assessment as disclosed by

Snyder to utilize the artifact assessment techniques as taught by Shimauchi since all of

the claimed elements were disclosed in the prior art and the combination would have

yielded predictable results to one of ordinary skill at the time of the invention.

Regarding **claim(s) 3 and 15,** Shimauchi in view of Snyder discloses wherein said

at least two event signals are patient monitored data signals (Snyder: Col. 4, ll. 42 – 47).

With regard to **claim 4,** Shimauchi in view of Snyder discloses all of the

limitations of claim 4 as discloses in claim 1 above and further discloses an alarm

indicator coupled to the controller, the alarm indicator being triggered if at least one of

the event signals crosses a preset threshold value and the controller determines that no

artifact was detected in the at least one event signal (Snyder: Col. 7, ll. 55 – 63).

Regarding **claim 5,** Shimauchi in view of Snyder inherently discloses a memory for recording the at least two event signals (Snyder: Col. 4, ll. 24 – 41).

Regarding **claim 6,** Shimauchi in view of Snyder discloses wherein said device is a server forming part of a client-server network (Shimauchi: Col. 1, ll. 11 – 39).

With regard to **claim 16,** Shimauchi in view of Snyder discloses the method further including: means for monitoring at least one physiological parameter of a patient and generating the at least two event signals, *sensors,* said at least two event signals conveying patient physiological parameter data (Snyder: Abstract; Col. 4, ll. 42 – 47).

12.   Claim(s) 7 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Snyder et al. (US 6,287,328, herein Snyder)** in view of **Shimauchi et al. (US 5,661,813, herein Shimauchi)**.

Regarding **claim 7,** Snyder discloses a controller, *inference processor;* a memory coupled to the controller; and an input interface which receives at least two event signals, the at least two event signals being patient monitored data signals, *measurement system;* wherein the controller determines whether an artifact is detected (Column 4, lines 24 – 41) and triggering an alarm indication in response determining that an artifact was detected (Abstract). Snyder fails to disclose the method of determining artifact corruption as claimed in the instant application.

However, Shimauchi teaches determining artifact, *echo,* corruption by using: a global correlation matrix for the at least two event signals over a first period of time, *correlation between previously received signals,* a local correlation matrix for the at least two event signals over a second period of time which is shorter than the first period of

time, *correlation between current received signals*, a correlation vector indicative of a

deviation between the local correlation matrix and the global correlation matrix, *a*

variation in the cross-correlation, an average of the correlation vector, *Normalized Least*

Mean Square algorithm, and whether an artifact, *echo*, was detected in one of the at

least two event signals from the correlation vector and the average, of the correlation

vector (Abstract, Fig. 6, Col. 2, ll. 9 – 37).

13.   As applicant admits on page 4, ll. 12 – 20 of the specification, that the instant

invention is intended for use with any measured input signal source, it would have been

obvious for one of ordinary skill in the art at the time of the invention to modify the

artifact assessment techniques as disclosed by Shimauchi for detection of artifact in a

patient monitoring system since all of the claimed elements were disclosed in the prior

art and the combination would have yielded predictable results to one of ordinary skill at

the time of the invention.

With regard to **claim 8,** Snyder in view of Shimauchi discloses wherein said

device is a patient monitoring system (Snyder: Abstract).

Regarding **claim 9,** Snyder in view of Shimauchi discloses wherein said at least

two event signals are patient monitored data signals (Snyder: Col. 4, ll. 42 – 47).

Regarding **claim 10,** Snyder in view of Shimauchi discloses providing the alarm

indication in response to at least one of the event signals crossing a preset threshold

value and no artifact was detected in the at least one event signal (Snyder: Col. 7, ll. 55

– 63).

With regard to **claim 11,** Snyder in view of Shimauchi inherently discloses a memory for recording the at least two event signals (Snyder: Col. 4, ll. 24 – 41).

Regarding **claim 12,** Snyder in view of Shimauchi discloses wherein said method is used in a server forming part of a client-server network (Shimauchi: Col. 1, ll. 11 – 39).

Conclusion

14.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luther G. Behringer whose telephone number is (571)270-3868. The examiner can normally be reached on Mon - Thurs 9:00 - 6:30; 2nd Friday 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Carl Layno can be reached on (571) 272-4949. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carl H. Layno/   /Luther G Behringer/
Supervisory Patent Examiner, Art Unit 3766   Examiner, Art Unit 3766